October 11, 2004

William A. Bonnet
Vice President
Government and Community Affairs

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PUBLIC UTILITIES
COMMISSION

The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
465 South King Street, First Floor
Kekuanaoa Building
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 03-0417
East Oahu Transmission Project
Response to Information Requests

HECO recently discovered that its response to LOL-HECO-IR-84 was inadvertently omitted from the responses filed on October 6, 2004. Please insert the attached response in the binder labeled Book 2 of 2 submitted on October 6, 2004. The word version of the response was included on the CD submitted on October 7, 2004.

Sincerely,

Attachment

cc: Division of Consumer Advocacy
Henry Q Curtis, Life of the Land
Scott K. Saiki
Karen H. Iwamoto, Palolo Community Council
Traver Carroll, Hoolaulima O Palolo
Corey Y.S. Park, Esq./Pamela W. Bunn, Esq., Malama O Manoa
Daisy M. Murai, Kapahulu Neighbors

LOL-HECO-IR-84

Ref: Exhibit 7, EDM Report. The report was co-authored by Dr. George Gela. Please provide the following information on the author. Please provide the answer either in electronic format or by providing a web address where the document(s) can be down-loaded from.

Question(s):

a. All articles, books, chapters, or other documents written in whole or in part by the Dr. Gela. Please provide the date of publication or release, the agency it was submitted to, the docket and/or file number that contains the document. Please provide electronic copies of all documents if they exist. Please provide the location of hard copies (source, cost, docket number, file number, or other identification).

b. All courses taken, degrees given, courses/classes taught by the witness. Please provide electronic copies of all documents if they exist. Please provide the location of hard copies (source, cost, docket number, file number, or other identification).

c. All presentations, testimonies, talks made and exhibits submitted by the witness to regulatory agencies. Please provide electronic copies of all documents if they exist. Please provide the location of hard copies (source, cost, docket number, file number, or other identification).

d. All projects overseen by the witness. Please include the dates of participation and any identifying characteristics of the project necessary to track down information about it. Please provide electronic copies of all documents if they exist. Please provide the location of hard copies (source, cost, docket number, file number, or other identification).

e. All correspondence between the witness and HECO with regard to their testimony. Please provide electronic copies of all documents if they exist. Please provide the location of hard copies (source, cost, docket number, file number, or other identification).

f. All reports, draft or otherwise, submitted by the witness to the utility. Please provide electronic copies of all documents if they exist. Please provide the location of hard copies (source, cost, docket number, file number, or other identification).

g. Please provide the work order for Dr. Gela regardless of whether he was employed by HECO, one of HECO's contractors, or a HECO subcontractor.

h. Which documents written by Dr. George Gela are in the possession of HECO?

HECO Response:

a. HECO objects to the request, as unduly burdensome, onerous and overly broad to the extent that it requests "[a]ll articles, books, chapters, or other documents written in whole or in part by the witness." The request for "[a]ll articles, books, chapters, or other documents written in whole or in part by the witness" could be construed to request documents written in whole or in part by the witness even if such documents were not related to the subject matter addressed by the witness or even if the document is not related in any way to the electric utility industry. Without waiving any objections, HECO provides the following response.

A list of the major publications and presentations authored and co-authored by Dr. Gela is attached as pages 5-13.

b. HECO objects to the request, as unduly burdensome, onerous and overly broad to the extent that it requests "[a]ll courses taken". The request is unduly burdensome, onerous and overly broad, because the request for "[a]ll courses taken" could be construed to include "courses" going all the way back to college. It would be unduly burdensome and onerous, as well as counterproductive for the witness to have to identify the "courses" taken going back to college. Without waiving any objections, please see the following response.

See Dr. Gela's resume attached as pages 14-16.

c. HECO objects to the request, as unduly burdensome, onerous and overly broad to the extent that it requests "[a]ll presentations, testimonies, talks made and exhibits submitted by the witness to regulatory agencies." The request is unduly burdensome, onerous and overly broad, because it could be construed to encompass numerous materials. Without waiving any objections, please see the following response.

See the list of major publications and presentations authored and co-authored by Dr. Gela attached as pages 5-13.

d. HECO objects to the request, as unduly burdensome, onerous and overly broad to the extent that it requests "[a]ll projects overseen by the witness." The request is unduly burdensome, onerous and overly broad, because it could be construed to encompass numerous materials. Without waiving any objections, please see the following response.

See the resume attached as pages 14-16.

e. Not applicable. Dr. Gela did not submit testimony on behalf of HECO in this proceeding.

f. No reports were submitted by Dr. Gela to HECO; the LW report was submitted to HECO by EDM.

g. See the response to LOL-HECO-IR-36, subpart b, for a copy of the work order for Dr. Gela.

h. The following is a list of documents written by Dr. Gela that are in the possession of HECO:

1. G. Gela, H.J. Fox, R. Ferraro, T. Verdecchio, P.F. Lyons, "Live Working on Vintage 138 kV Steel Lattice Structures", IEEE Transactions on Power Delivery, Vol. 16, No. 1, January 2001, pp. 6-11.
2. G. Gela, P.W. Hotte, M. Charest, "IEC Method of Calculation of Minimum Approach Distances for Live Working", IEEE Transactions on Power Delivery, Vol. 15, No. 2, April 2000, pp. 635-640.
3. G. Gela, M. Charest, "IEC/TC78 'Live Working': Background, Structure, Program of Work and Market Relevance", IEEE Transactions on Power Delivery, Vol. 15, No. 1, January 2000, pp. 210-215.
4. G. Gela, A.E. Lux, H. Kientz, D.A. Gillies, J.D. Mitchell, P.F. Lyons, "Application of Portable Protective Gaps for Live Work on Compact 550 kV Transmission Lines", IEEE Transactions on Power Delivery, Vol. 11, No. 3, July 1996, pp. 1419-1429.
5. G. Gela (Chairman, WG 15.07.02), "Bibliography of Literature for Live-Line Maintenance and Related Topics", IEEE Transactions on Power Delivery, Vol. 7, No. 3, July 1992, pp. 1552-1562.
6. *Live Working Field Guide,* 2002, Product ID 1006898
7. *Live Working Application Guide,* 2002, Product ID 1001917

The first five documents are available for review at HECO's Regulatory Affairs Office. Please contact George Hirose at 543-4787 to make arrangements for a review. The last two documents are EPRI publications. See the response to LOL-HECO-IR-38, subpart b, for information regarding the availability of these documents.

PEER-REVIEWED PAPERS

1. G. Gela, H.J. Fox, R. Ferraro, T. Verdecchio, P.F. Lyons, "Live Working on Vintage 138 kV Steel Lattice Structures", IEEE Transactions on Power Delivery, Vol. 16, No. 1, January 2001, pp. 6-11.
2. G. Gela, P.W. Hotte, M. Charest, "IEC Method of Calculation of Minimum Approach Distances for Live Working", IEEE Transactions on Power Delivery, Vol. 15, No. 2, April 2000, pp. 635-640.
3. G. Gela, M. Charest, "IEC/TC78 'Live Working': Background, Structure, Program of Work and Market Relevance", IEEE Transactions on Power Delivery, Vol. 15, No. 1, January 2000, pp. 210-215.
4. P.W. Hotte, G. Gela, J.D. Mitchell, P.F. Lyons, "Electrical Performance of Conductive Suits", IEEE Transactions on Power Delivery, IEEE Transactions on Power Delivery, Vol. 12, No. 3, July 1997, pp. 1193-1201.
5. G. Gela, H. Kientz, H.J. Fox, J.D. Mitchell, P.F. Lyons, "Defective Insulators in Live Working on a 550 kV Compact Steel Lattice Tower", IEEE Transactions on Power Delivery, Vol. 12, No. 2, April 1997, pp. 783-790.
6. G. Gela, A.E. Lux, H. Kientz, D.A. Gillies, J.D. Mitchell, P.F. Lyons, "Application of Portable Protective Gaps for Live Work on Compact 550 kV Transmission Lines", IEEE Transactions on Power Delivery, Vol. 11, No. 3, July 1996, pp. 1419-1429.
7. G. Gela (Chairman, WG 15.07.02), "Bibliography of Literature for Live-Line Maintenance and Related Topics", IEEE Transactions on Power Delivery, Vol. 7, No. 3, July 1992, pp. 1552-1562.
8. G. Gela, N. Kolcio (principal authors), Task Force 15.07.03.02, "Correlation of AC, Switching Surge and DC Breakdown Test Results for Insulating Blankets and Line Hoses", IEEE Transactions on Power Delivery, Vol. 7, No. 3, July 1992, pp. 1474-1483 (awarded IEEE Outstanding Technical Report Prize, 1993).
9. Z. Yan, B.L. Qin, X. Lin, R.Y. Weng, G. Gela, "Calculation and Measurement of Field Parameters During Live-Line Maintenance", IEEE Transactions on Power Delivery, Vol. 6, No. 3, July 1991, pp. 1187-1195.
10. G. Gela, M. Balpinarli, "Insulation Coordination in Distribution Liveline Maintenance," IEEE Transactions of Power Delivery, Vol. 3, No. 4, October 1988, pp. 1922-1927.
11. G. Gela and J.J. Dai, "Calculation of Thermal Fields of Underground Cables Using the Boundary Element Method", IEEE Transaction on Power Delivery, Vol. 3, No. 4, October 1988, pp. 1341-1347.
12. M. Balpinarli, J.J. Dai, G. Gela, "AC and DC Breakdown versus Thickness Characteristics for Rubber Gloves," IEEE Transactions of Power Delivery, Vol. 3, No. 1, January 1988, pp. 384-391.

13. M. Balpinarli, G. Gela, T.A. Vaughan, "AC and DC Testing for Electrical Insulation Value of Rubber Gloves," IEEE Transactions of Power Delivery, Vol. 3, No. 1, January 1988, pp. 377-383.

14. B.L. Qin, J.N. Sheng, Z. Yan, G. Gela, "Accurate Calculation of Ion Flow Field Under HVDC Bipolar Transmission Lines", IEEE Transactions of Power Delivery, Vol. 3, No. 1, January 1988, pp. 368-376.

15. J.N. Sheng, Z. Yan, B.L. Qin, G. Gela, "DC Ion Flow Fields: Uniqueness of Solution and Application of the Charge Simulation Method", Journal of the Franklin Institute, 1987.

16. G. Gela, S.A. Sebo, "High Voltage and Insulation Engineering – A Model Curriculum", IEEE Transactions of Power Systems, Vol. PWRS-1, No. 4, November 1986, pp. 187-195.

17. W. Janischewskyj, P. Sarma Maruvada, G. Gela, "Corona Losses and Ionized Fields of HVDC Transmission Lines", paper 36-06, 1982 CIGRE General Meeting, Paris, September 1982.

18. M.M.A. Salama, R.F. Dudley, G. Gela, "Calculation of Steady-State Surface Stresses at Winding Ends of Air-Core Power Reactors", IEEE Transactions of Power Apparatus and Systems, Vol. PAS-100, No. 7, July 1981, pp. 3673-3678.

19. W. Janischewskyj, G. Gela, "Finite Element Solution for Electric Fields of Coronating DC Transmission Lines", IEEE Transactions of Power Apparatus and Systems, Vol. PAS-98, No. 3, May/June 1979, pp. 1000-1012.

CONFERENCE PAPERS

1. G. Gela, et al, "Re-establishing the Live Working Program on 345 kV Structures at Northeast Utilities", ICOLIM 2004 Proceedings, Bucharest, Romania.
2. G. Gela, et al, "Practical Concept for Live-Line Maintenance on EGAT 's 500 kV Compact Line: Application of Portable Protective Air Gaps", ICOLIM 2004 Proceedings, Bucharest, Romania.
3. G. Gela et al, "Development of an Industry Guide for Live Work on AC Transmission Lines", ICOLIM 2004 Proceedings, Bucharest, Romania.
4. G. Gela, "Live working - Technical, Safety and Related Issues", 35th Annual Transmission and Substation Design and Operation Symposium, September 11-13, 2002, Arlington, TX.
5. G. Gela, H.J. Kientz, "Step, Touch and Transferred Voltages - A New Nemesis?", ICOLIM 2002 Proceedings, Berlin, Germany, pp. 111-114.
6. G. Gela, R. Ferraro, T. Verdecchio, "Portable Protective Air Gaps", ICOLIM 2002 Proceedings, Berlin, Germany, pp. 103-107.
7. G. Gela, C. Vincent, M. Charest, "IEC/TC78 'Live Working': Structure, Strategy and Program of Work", ESMO 2000 Proceedings, Montreal, Canada, pp. 41- 50, and ICOLIM 2000 Proceedings, Madrid, Spain, pp. 441-448.
8. G. Gela, H. Kientz, "Further Comparison of the IEC and IEEE Methods of Calculation of Minimum Approach Distance", ICOLIM 2000 Proceedings Addendum, Madrid, Spain.
9. G. Gela, R. Ferraro, T. Verdecchio, "Live Re-Stringing Of 138 kV Lines", ESMO 2000 Proceedings, Montreal, Canada, pp. 404-409, and ICOLIM 2000 Proceedings, Madrid, Spain, pp. 435-438.
10. G. Gela, H. Kientz, J.D. Mitchell, P.F. Lyons, "Wet and Dry Testing of Insulating Poles", ICOLIM 1998 Proceedings, Lisboa, Portugal, pp. 339-345.
11. G. Gela, M. Ostendorp, "Assessing The Integrity Of Vintage Ceramic Insulators", ESMO 2000 Proceedings, Montreal, Canada, pp. 344-351, and ICOLIM 2000 Proceedings Addendum, Madrid, Spain.
12. G. Gela, M. Ostendorp, "Fiber Optics Installations in High Voltage Corridors: Overview of Issues", ICOLIM 1998 Proceedings, Lisboa, Portugal, pp. 256-266.
13. G. Gela, D. Mitchell, "Assessing The Electrical And Mechanical Integrity Of Composite Insulators Prior To Live Working", ESMO 2000 Proceedings, Montreal, Canada, pp. 339-343, and ICOLIM 2000 Proceedings, Madrid, pp. 427-431.
14. G. Gela, N. Kolcio, "Electrical Performance Of Cover-Up Equipment", ESMO 2000 Proceedings, Montreal, Canada, pp. 334-338, and ICOLIM 2000 Proceedings, Madrid, Spain, pp. 421-425.
15. E.I. Udod, V.N. Molchanov, V.L. Taloverya, O.S. Ilienko, I.O. Ilienko, V.G. Santotsky, G. Gela, "Development, Design and Optimization of Screens for Industrial Frequency Magnetic Field Protection", ICOLIM 1998 Proceedings, Lisboa, Portugal, pp. 204-211.

16. G. Gela, B.A. Clairmont, "Transmission Line Compaction and Upgrading: Live Working Issues", ICOLIM 1998 Proceedings, Lisboa, Portugal, pp. 162-169.

17. E. Udod, V. Molchanov, V. Taloverya, B.A. Brjesitsky, G. Gela, "Device for Overvoltage Control in Live Line Working", ESMO 1998 Proceedings, pp. 246-252.

18. G. Gela, P.W. Hotte, M. Charest, "IEC Method of Calculation of Minimum Approach Distances for Live Working", ESMO 1998 Proceedings, pp. 154-159, and ICOLIM 1998 Proceedings, Lisboa, Portugal, pp. 153-161, also IEEE Transactions on Power Delivery, Vol. 15, No. 2, April 2000, pp. 635-640.

19. G. Gela, M. Charest, "IEC/TC78 'Live Working': Background, Structure, Program of Work and Market Relevance", ESMO 1998 Proceedings, pp. 33-38, also IEEE Transactions on Power Delivery, Vol. 15, No. 1, January 2000, pp. 210-215.

20. G. Gela, H.J. Fox, R. Ferraro, T. Verdecchio, P.F. Lyons, "Live Working on Vintage 138 kV Steel Lattice Structures", ESMO 1998 Proceedings, pp. 27-32, also IEEE Transactions on Power Delivery, Vol. 16, No. 1, January 2001, pp. 6-11.

21. E. Udod, V. Molchanov, V. Taloverya, N. Ivanov, V. Dyakov, G. Gela, "Automated Apparatus for Live Work on Overhead Transmission Lines", ESMO 1998 Proceedings, pp. 19-26, ICOLIM 1998 Proceedings, Lisboa, Portugal, pp. 492-499.

22. G. Gela, M. Charest, "IEC/TC78 'Live Working': Historical Overview, New Structure and Programme of Work", ICOLIM 1996 Proceedings, Venice, Italy, pp. 433-440.

23. G. Gela, P.W. Hotte, J.D. Mitchell, P.F. Lyons, "Resistance and Shielding Characteristics of Conductive Suits", ICOLIM 1996 Proceedings, Venice, Italy, pp. 227-238.

24. G. Gela, H. Kientz, D.A. Gillies, J.D. Mitchell, P.F. Lyons, "Application of Portable Protective Gaps in Live Work", ICOLIM 1996 Proceedings, Venice, Italy, pp. 125-137.

25. G. Gela, H. Kientz, D.A. Gillies, P.F. Lyons, "Operational and Maintenance Issues of Upgraded Lines", "The Future of Power Delivery" EPRI Conference, Washinton, DC, 1996.

26. P.W. Hotte, G. Gela, J.D. Mitchell, P.F. Lyons, "Electrical Performance of Conductive Suits", ESMO 1995 Proceedings, Columbus, Ohio, pp. 171-176, also IEEE Transactions on Power Delivery, IEEE Transactions on Power Delivery, Vol. 12, No. 3, July 1997, pp. 1193-1201.

27. G. Gela, H. Kientz, D.A. Gillies, J.D. Mitchell, P.F. Lyons, "Use of Portable Protective Gaps on the California-Oregon Transmission Project Compact 550 kV Line", ESMO 1995 Proceedings, Columbus, Ohio, pp. 156-162.

28. G. Gela, H. Kientz, H.J. Fox, J.D. Mitchell, P.F. Lyons, "Defective Insulators in Live Working on a 550 kV Compact Steel Lattice Tower", ESMO 1995 Proceedings, Columbus, Ohio, pp. 150-155, also IEEE Transactions on Power Delivery, Vol. 12, No. 2, April 1997, pp. 783-790.

29. Z. Yan, B.L. Qin, X. Lin, R.Y. Weng, G. Gela, "Calculation and Measurement of Field Parameters During Live-Line Maintenance", ESMO 1990 Proceedings, Toronoto, Canada, p. 131, also IEEE Transactions on Power Delivery, Vol. 6, No. 3, July 1991, pp. 1187-1195.

30. Z. Yan, C. Wen, G. Gela, "Distribution of Ion Flow Field Characteristics in Air Under HVDC Transmission Lines", 1986 Annual Report, Conference on Electrical Insulation and Dielectric Phenomena, Claymont, Delaware, Nov. 2-6, 1986, pp. 508-515.

31. Z. Yan, J.N. Sheng, C. Wen, B.L. Qin, G. Gela, S.A. Sebo, "Sensitivity Studies of Ionized Field Quantities in Air Under HVDC Transmission Lines", Conference Record of the 1986 IEEE International Symposium on Electrical Insulation, Washington, D.C., June 9-11, 1986, pp. 298-301.

32. W. Janischewskyj, G. Gela, "Computation of Electric Fields Surrounding HVDC Transmission Lines in Corona", Proceedings of the Japan – US Science Seminar on Detection and Control of Electric Field and Space Charge in Electrical Environmental Problems, Kyusyu University, Japan, October 1984, pp. 167-181.

33. G. Gela, R.S. Daniel, R.M. Alberton, "Measurement of Capacitances of Air-Core Coils", Proceedings of the 1983 International Electrical, Electronics Conference, Toronto, Canada, September 26-28, 1983, pp. 650-653.

34. F. Barankin, R.F. Dudley, G. Gela, "Inconsistencies in Loading and Overloading Philosophies of Air-Core Dry-Type Current Limiting Reactors", Proceedings of the Canadian Communications and Energy Conference, Montreal, Canada, October 13-15, 1982, pp. 160-170.

35. R.F. Dudley, G. Gela, L. Goudge, "Application of Lightning Arresters to Line Traps", Proceedings of the Canadian Communications and Energy Conference, Montreal, Canada, October 13-15, 1982, pp. 35-38.

36. W. Janischewskyj, G. Gela, "Computation of Ionized Fields of DC Transmission Lines", Proceedings of the Canadian Communications and Power Conference, Montreal, Canada, October 1980, pp. 15-17.

37. G. Gela, W. Janischewskyj, "Surges on Singles-Conductor Transmission Lines Exhibiting Effects of Frequency and Corona", Proceedings of the 1976 IEEE International Symposium on Circuits and Systems, Munich, April 27-29, 1976, pp. 614-617.

38. G. Gela, W. Janischewskyj, "Modelling of Transmission Lines Including Corona and Frequency Dependence of Parameters", Conference Digest, 1975 International Electrical, Electronics Conference, Toronto, Canada, 1975, pp. 152-153.

PRESENTATIONS

(FOR INTERNATIONAL AUDIENCE, BY INVITATION)

1. G. Gela, "IEC/TC78 'Live Working': Standards for Live Working", 2nd International Symposium on Electrical Safety, Lima, Peru, 2003
2. G. Gela, "Research Topics in Transmission and Substations - EPRI Program", Rio de Janeiro, Brazil, 2003.
3. G. Gela, "Live Working - Technical, Safety and Related Issues - Contribution from IEC/TC78 'Live Working'", IEC Symposium on Safety, Kyiv, Ukraine, 2001
4. G. Gela, "Using Helicopters to Service High Voltage Transmission Lines, Including Live Work: The North American Experience", Helicopter Service for Power Line Systems Conference, Katowice, Poland, 1999.
5. G. Gela, "Transmission Line Upgrading", Transmission Line Upgrading Workshop, Warsaw, Poland, 1999.
6. G. Gela, "Live Working", "Compact Transmission Lines", World Energy Council - Ukrainian Energy Committee Seminars, Kyiv, Ukraine, 1999.
7. G. Gela, J. Ferguson, "Increased Power Flow", EPRI Seminars, Warsaw, Poland, 1997.
8. G. Gela, "Live-Line Maintenance in the USA", Shenyang, China, 1993.
9. G. Gela, "Designing Transmission Lines", X'ian, China, 1993.

PANEL SESSIONS, SEMINAR PRESENTATIONS

1. Numerous, including the week-long Lenox High Voltage Transmission Line Seminars.

EPRI PROJECT REPORTS (G. GELA PRINCIPAL AUTHOR)

1. *Survey of Utility Practices for Establishing Equipotential Zones During De-Energized Work,* 2003, Product ID
2. *Electrical Condition Assessment of Polymer Insulators for Live Working,* 2003, Product ID
3. *Live Working on dc Systems Operating at Less than 60 kVdc,* 2002, EDF Project OT-3
4. *AC Transmission Line Upgrading 60 kV to 225 kV - Review of USA Operating Experience,* 2002, EDF Project OT-4
5. *EPRI Improved Insulating Tool Tester,* 2002, Product ID 1007555
6. *Reclassification of Relaying Current Transformers (CTs) for Revenue Metering, Step 2: Test Facility and CT Database,* EPRI, Palo Alto, CA: 2002, 1001796
7. *Criteria for Development of an Improved Insulating-Tool Tester,* 2002, Product ID 1001751
8. *Tools and Methods to Perform Live Work on Reduced Clearance Facilities - Interim Report,* 2002, Product ID 1001749
9. *Identifying Defects in Polymer Insulators that are Detrimental to Live Working,* 2002, Product ID
10. *Underground Event Mitigation: State of Science Report & Workshop Summary,* 2002, Product ID 1001647
11. *Live Working Field Guide,* 2002, Product ID 1006898
12. *Live Working Application Guide,* 2002, Product ID 1001917
13. *Reclassification of Relaying Current Transformers (CTs) for Revenue Metering, Step 1: Test Three Typical 38 kV Relaying CTs and Evaluate their Accuracy as a Function of Burden and Primary Current,* EPRI, Palo Alto, CA: 1999, 1001961
14. *Condition Evaluation of PILC Underground Cables on ComEd 12.5 kV System,* 2001, Project ID
15. *Testing of Insulators for Conesville Turbine Exhaust Steam,* 2001, Product ID
16. *PSE&G Ceramic Insulator Condition Evaluation Summary*, EPRI, Palo Alto, CA: 1999, Interim Report.
17. *PSE&G Metuchen-Trenton 138kV Re-Conductoring,* EPRI, Palo Alto, CA: 1999 Final Report.
18. *Ceramic Insulator Condition Evaluation Summary for NYPA – First Shipment of Insulators*, and *NYPA Shipment 1* and *NYPA Shipment 2,* EPRI, Palo Alto, CA: 1999, Interim Reports.
19. *Porcelain Insulator Condition Evaluation Summary Report – NIPSCO*, EPRI, Palo Alto, CA: 1999, Interim Report.
20. *Use of Gloves and Cover-Ups above 46kV,* EPRI Palo Alto, CA: 1999. TP-113981
21. *Advanced Live Working Techniques and Tools,* EPRI, Palo Alto, CA: 1999. TP-113980

22. *Evaluation of the Performance of Non-Ceramic Insulators for Live Working Applications: Replacing Ceramic Insulators with NCI,* Interim Report 1998, EPRI, Palo Alto, CA: 1998.

23. *Upgrading 46 kV Line to 115 kV,* Draft Final Report, 1998

24. *Live Working on Alabama Power Company Structures*, EPRI, Palo Alto, CA: 1998. Draft Final Report.

25. *Sparkover Performance and Gap Factors of Air Gaps Below 1 Meter,* EPRI, Palo Alto, CA: 1998. TP-106335

26. *Transmission Line Compaction 69 kV to 230 kV, Interim Report on Work Performed in 1997,* 1998, Product ID

27. *Energized Work on Idaho Power Company's Existing 345 kV Structures,* EPRI, Palo Alto, CA, November 1997: TR-108968

28. *Live Working on PSE&G 138kV Double-Circuit Steel Lattice Tower,* EPRI, Palo Alto, CA: May 1997. TR-108329

29. *Explosion Tests for Manhole Explosion PMC (Prevention, Mitigation, and Containment),* 1996, Progress Report

30. *PECO 34.5 kV System Operation and Reliability,* 1996, W0 7044-1

31. *Electrical Performance of Conductive Suits*, EPRI Palo Alto, CA: 1995. Report TR-104640

32. *Design, Construction and Capabilities of the Manhole Cover Event Evaluation Facility in Lenox, MA,* 1005, TR-104978

33. *Electrical Performance of a Portable Protective Gap (PPG) in a Compact 550-kV Tower,* EPRI Palo Alto, CA: 1994. TR-103860

34. *Air Gap Sparkover and Gap Factors - Analysis of Published Data,* EPRI Palo Alto, CA: 1994. Report TR-104437

35. *Helicopter-Based Live-Line Work, Vol. 1: Helicopter Platform Work Between Phases, Vol. 2: Bosun's Chair Work Near Suspension Insulators,* Final Report, EPRI Palo Alto, CA: 1993. TR-102318

36. *High Voltage Tests on TOMCAT 2000 System in Live-Line Working Environments (Horizontal Line Configuration),* 1993

COMMERCIAL PROJECT REPORTS (SELECTED)

1. *Development of 115/138 kV, 230 kV and 345 kV Portable Protective Air Gaps for Live Working for PSE&G,* 2001
2. *Final Report on Manhole Cover Tests for ConEdison at Lenox,* 2001, WO-052699
3. *Final Report on Manhole Event Tests for Pepco at Lenox,* 2000, WO-049296
4. *Analysis, Design, and Refurbishment Feasibility Evaluation for Honeywell's Existing 34.5 kV Power Line(s),* 2000
5. *Corona Performance and Qualification Testing on Suwannee 959.9 kcmil ACSS/TW Conductor at 345 kV,* 2000, WO-045724
6. *Operating Tetra Compact BTS in Proximity to High Voltage Power Lines,* 1999, WO-044296
7. *Montana Power Company Rubber Gloving Program for Overhead Work,* 1996
8. *Special Transient Overvoltage (Switching Surge) Tests for Gary Guards,* 1994
9. *AC Tests of Gary Guards,* 1992
10. *Open-Circuit Voltage and Short-Circuit Current of Railway Cars,* 1991

George Gela, Ph.D., P.Eng.

1. Employer	EPRIsolutions, Inc. 115 East New Lenox Road Lenox, MA 01240
2. Position:	Manager Insulation and Testing
3. Education:	B.A.Sc., Electrical Engineering, University of Toronto, 1973 M.A.Sc, Electrical Engineering, University of Toronto, 1975 Ph.D., Electrical Engineering, University of Toronto, 1980
4. Other Training:	Management and Leadership course, George Brown College, Toronto, Canada, August 1982 Electromagnetic Transients and Insulation Coordination Seminar, General Electric, May 1991 Project Leadership Course, General Electric, October 1992
5. Membership of Professional Societies:	International Chairman: IEC/TC 78 "Live Working"; WG 1 US Expert; Registered Professional Engineer, Ontario, Canada; Senior Member: IEEE; Member: CIGRÉ, US Representative to SC C4; Convenor of WG C4.2 Past Chairman: IEEE/PES/T&D/C&FE Design and Environmental Considerations Working Group; Past Chairman: IEEE/PES/T&D/ESMOL Guide for Live Line Maintenance Working Group; Past Chairman: IEEE/PES Berkshire Chapter; Member: Ukrainian Engineers' Society of America; Past IEEE Officer: PES, IAS, Section, Chapter, various levels; Past Convenor: IEC/TC78 Working Group 6; Past member: Canadian Society for Electrical Engineers, American Society for Engineering Education, Ukrainian American Association of University Professors
6. Employment Record: Employer names underwent several changes:	EPRIsolutions, January 2000 – Present EPRI, January 1999 – December 2000 J.A. Jones, January 1995 – December 1998 General Electric, March 1990 - December 1994 All at the same address: 115 East New Lenox Road Lenox, MA 01240 Dr. Gela joined the Lenox facility in March 1990 as an employee of General Electric

Position: Manager Insulation and Testing

Duties: Dr. Gela is an experienced, respected and effective researcher, manager of research and testing projects, instructor and leader. His duties include development, management and conduct of research and testing projects in live working, including analysis, development and technology transfer in the areas of work methods, performance evaluation and validation of tools, development of standards, defective insulator aspects, and safety aspects. He is responsible for project execution, supervision of the project teams, marketing, funding development, and project budgets. He also conducts research and testing projects on causes and mitigation methods of explosions in underground power systems, compact and upgraded overhead transmission lines, and is responsible for development of software for design and analysis of transmission lines.

7. Employment Record (cont'd): 1984 – 1990

Employer: The Ohio State University
Columbus, Ohio

Position: Assistant Professor

Duties: Dr. Gela conducted research in high voltage, live working, electric machines and power electronics. He taught graduate and undergraduate courses in high voltage engineering, electric machines, power electronics and basic electricity. He supervised graduate and undergraduate students and guided student projects.

1980 – 1983

Employer: Trench Electric Co. Ltd.
Toronto, Canada

Position: Project Leader, High Voltage Studies

Duties: Dr. Gela was responsible for all voltage-related aspects of the high-voltage coil product line. He conducted and managed research projects on development of high-voltage coil insulation systems, and high-temperature insulation-encapsulation systems for the high-voltage coils. He provided technical support to customers and marketing.

1985 and 1988

Employer: University of Toronto
Toronto, Canada

Position:	Visiting Professor
Duties:	Dr. Gela conducted research on transmission line magnetic fields, and performance of dc insulators.
Consulting:	1978 - 1988 Ontario Hydro, Toronto, Canada Edison Welding Institute, Columbus, Ohio Applied Biotechnologies, Akron, Ohio Panex Corporation, Newark, Ohio Xetron Corporation, Cincinnati, Ohio Trench Electric, Toronto, Canada
8. Awards:	Named Outstanding Engineer for 2000 by the IEEE/PES Region 1 and IEEE Berkshire Section, 2001; IEEE/PES Working Group Recognition Award for the best Technical Report for 1993; Industrial Research Fellowship, Trench Electric Co., Toronto, Canada, 1982-1983; Industrial Postdoctoral Fellowship, Trench Electric Co., Toronto, Canada, 1980-1982; Ontario Graduate Fellowship, University of Toronto, Toronto, Canada, 1978-1979; Teaching Assistant Award, University of Toronto, Toronto, Canada, 1977; National Research Council of Canada Scholarship, University of Toronto, Toronto, Canada, 1973-1977; Listed in *Marquis Who's Who in The East* Listed in *Marquis Who's Who in Science and Engineering* Listed in *Strathmore's Who's Who*
9. Publications and presentations:	Authored or co-authored more than 25 peer-reviewed or conference technical papers, gave more than 25 major technical seminars and presentations, authored or co-authored more than 30 major research reports, chaired or participated in more than 15 technical panels.
10. Patents	"Portable Protective Air Gap Device and Method", serial no 60/327,935, pending